Amendments to the Claims

Please cancel Claims 62, 65, and 68. Please amend Claims 30, 32, 34, 38, 42, 45, 46, 48, 61, 64, 67, 77, 80 and 83. The Claim Listing below will replace all prior versions of the claims in the application:

Claim Listing

1-29. (Canceled)

30. (Currently amended) A method of detecting or identifying an agent which binds a mammalian CXC Chemokine Receptor 3 (CXCR3) protein or ligand binding variant thereof, comprising combining an agent to be tested and a composition comprising an isolated and/or recombinant mammalian CXCR3 protein or ligand binding variant thereof under conditions suitable for binding of ligand to said mammalian CXCR3 protein or ligand binding variant, and detecting or measuring the formation of a complex between said agent and said mammalian CXCR3 protein or ligand binding variant,

wherein said mammalian CXCR3 protein or ligand binding variant selectively binds at least one chemokine selected from the group consisting of IP-10 and Mig, and shares at least ~~about~~ 90% amino acid sequence identity with SEQ ID NO:2.

31. (Previously presented) The method of Claim 30, wherein the agent is a ligand selected from the group consisting of human IP-10 and human Mig.

32. (Currently amended) The method of Claim 31, wherein the ligand is labeled with a label selected from the group consisting of a radioisotope, spin label, antigen label, enzyme label, ~~flouresceni~~ fluorescent group and chemiluminescent group.

33. (Previously presented) The method of Claim 30, wherein the assay is a competition assay, in which binding is determined in the presence of one or more ligands selected from the group consisting of human IP-10 and human Mig.

34. (Currently amended) A method of detecting or identifying an agent which binds a mammalian CXCR3 protein or a ligand binding variant thereof comprising:

a) combining an agent to be tested and a host cell expressing recombinant mammalian CXCR3 protein or a ligand binding variant thereof under conditions suitable for binding of ligand to said mammalian CXCR3 protein or ligand binding variant; and

b) detecting or measuring the formation of a complex between said agent and said mammalian CXCR3 protein or ligand binding variant,

wherein said mammalian CXCR3 protein or ligand binding variant selectively binds at least one chemokine selected from the group consisting of IP-10 and Mig, and shares at least ~~about~~ 90% amino acid sequence identity with SEQ ID NO:2.

35. (Previously presented) The method of Claim 34, wherein the agent is a ligand selected from the group consisting of human IP-10 and human Mig.

36. (Previously presented) The method of Claim 34, wherein the assay is a competition assay, in which binding is determined in the presence of one or more ligands selected from the group consisting of human IP-10 and human Mig.

37. (Previously presented) The method of Claim 34, wherein the mammalian CXCR3 protein or ligand binding variant thereof can mediate cellular signalling and/or a cellular response, and the formation of a complex is monitored by detecting or measuring a signalling activity or cellular response induced upon ligand binding to said mammalian CXCR3 protein or ligand binding variant, wherein said signalling activity or cellular response is selected from the group consisting of a transient rise in the concentration of cytosolic free Ca^{2+} ($[Ca^{2+}]_i$), chemotaxis, exocytosis, degranulation and inflammatory mediator release.

38. (Currently amended) A method of detecting or identifying an inhibitor of ligand binding to a mammalian CXCR3 protein or a ligand binding variant thereof comprising:

a) combining an agent to be tested, a ligand of said mammalian CXCR3 protein and a composition comprising isolated and/or recombinant mammalian CXCR3 protein or ligand binding variant thereof under conditions suitable for binding of ligand to said mammalian CXCR3 protein or ligand binding variant; and

b) detecting or measuring the formation of a complex between said mammalian CXCR3 protein or ligand binding variant and said ligand,

wherein inhibition of complex formation by the agent is indicative that the agent is an inhibitor, and

said mammalian CXCR3 protein or ligand binding variant selectively binds at least one chemokine selected from the group consisting of IP-10 and Mig, and shares at least ~~about~~ 90% amino acid sequence identity with SEQ ID NO:2.

39. (Previously presented) The method of Claim 38, wherein the ligand is selected from the group consisting of human IP-10 and human Mig.

40. (Previously presented) The method of Claim 38, wherein the composition comprising isolated and/or recombinant mammalian CXCR3 protein or ligand binding variant thereof contains a host cell expressing said recombinant mammalian CXCR3 protein or ligand binding variant thereof.

41. (Previously presented) The method of Claim 40, wherein said mammalian CXCR3 protein or ligand binding variant thereof can mediate cellular signalling and/or a cellular response, and the formation of a complex is monitored by detecting or measuring a signalling activity or cellular response induced upon ligand binding to said mammalian CXCR3 protein or ligand binding variant, wherein said signalling activity or cellular response is selected from the group consisting of a transient rise in the concentration of cytosolic free Ca^{2+} ($[Ca^{2+}]_i$), chemotaxis, exocytosis, degranulation and inflammatory mediator release.

42. (Currently amended) A method of detecting or identifying an inhibitor of ligand binding to a mammalian CXCR3 protein or ligand binding variant thereof comprising:

a) combining an agent to be tested, a ligand of said mammalian CXCR3 protein and a host cell expressing a recombinant mammalian CXCR3 protein or ligand binding variant thereof under conditions suitable for binding of ligand to said mammalian CXCR3 protein or ligand binding variant; and

b) detecting or measuring the formation of a complex between said mammalian CXCR3 protein or ligand binding variant and said ligand,

wherein inhibition of complex formation by the agent is indicative that the agent is an inhibitor, and

said mammalian CXCR3 protein or ligand binding variant selectively binds at least one chemokine selected from the group consisting of IP-10 and Mig, and shares at least ~~about~~ 90% amino acid sequence identity with SEQ ID NO:2.

43. (Previously presented) The method of Claim 42, wherein the ligand is selected from the group consisting of human IP-10 and human Mig.

44. (Previously presented) The method of Claim 42, wherein said mammalian CXCR3 protein or ligand binding variant thereof can mediate cellular signalling and/or a cellular response, and the formation of a complex is monitored by detecting or measuring a signalling activity or cellular response induced upon ligand binding to said mammalian CXCR3 protein or ligand binding variant, wherein said signalling activity or cellular response is selected from the group consisting of a transient rise in the concentration of cytosolic free Ca^{2+} ($[Ca^{2+}]_i$), chemotaxis, exocytosis, degranulation and inflammatory mediator release.

45. (Currently amended) The method of Claim 42 wherein the agent is an antibody or ~~antibody fragment~~ binding fragment thereof.

46. (Currently amended) A method of detecting or identifying an inhibitor of a mammalian CXCR3 protein or functional variant thereof comprising combining an agent to be tested,

(a) a host cell expressing a recombinant mammalian CXCR3 protein or functional variant thereof, and

(b) a ligand or promoter of said mammalian CXCR3 protein or functional variant, under conditions suitable for detecting a ligand- or promoter-induced response, and assessing the ability of the test agent to inhibit said response,

wherein inhibition of a ligand- or promoter-induced response by the agent is indicative that the agent is an inhibitor, and

said mammalian CXCR3 protein or functional variant selectively binds at least one chemokine selected from the group consisting of IP-10 and Mig, and shares at least ~~about~~ 90% amino acid sequence identity with SEQ ID NO:2.

47. (Previously presented) The method of Claim 46, wherein the response is monitored by detecting or measuring a signalling activity or cellular response of said mammalian CXCR3 protein or functional variant thereof induced upon binding of ligand or promoter, wherein said signalling activity or cellular response is selected from the group consisting of a transient rise in the concentration of cytosolic free Ca^{2+} ($[Ca^{2+}]_i$), chemotaxis, exocytosis, degranulation and inflammatory mediator release.

48. (Currently amended) A method of detecting or identifying a promoter of a mammalian CXCR3 protein or functional variant thereof comprising combining an agent to be tested and a host cell expressing a recombinant mammalian CXCR3 protein or functional variant thereof under conditions suitable for detecting a receptor-mediated response, and detecting or measuring said response,

wherein induction or stimulation of said response by the agent is indicative that the agent is a promoter, and

said mammalian CXCR3 protein or functional variant selectively binds at least one chemokine selected from the group consisting of IP-10 and Mig, and shares at least ~~about~~ 90% amino acid sequence identity with SEQ ID NO:2.

49-60. (Canceled)

61. (Currently amended) A method of detecting or identifying an inhibitor of ligand binding to a mammalian CXCR3 protein or a ligand binding variant thereof comprising:

a) combining an agent to be tested, a ligand of said mammalian CXCR3 protein and a composition comprising isolated and/or recombinant mammalian CXCR3 protein or a ligand binding variant thereof under conditions suitable for binding of ligand to said mammalian CXCR3 protein or ligand binding variant; and

b) detecting or measuring the formation of a complex between said mammalian CXCR3 protein or ligand binding variant and said ligand,

wherein inhibition of complex formation by the agent is indicative that the agent is an inhibitor, and

said mammalian CXCR3 protein or ligand binding variant selectively binds at least one chemokine selected from the group consisting of IP-10 and Mig, and is encoded by a nucleic acid sharing at least ~~about 75%~~ 90% nucleotide sequence similarity with the coding region of the sequence illustrated in SEQ ID NO:1.

62-63. (Canceled)

64. (Currently amended) A method of detecting or identifying an inhibitor of a mammalian CXCR3 protein or functional variant thereof comprising combining an agent to be tested,

(a) a host cell expressing a recombinant mammalian CXCR3 protein or functional variant thereof, and

(b) a ligand or promoter of said mammalian CXCR3 protein or functional variant, under conditions suitable for detecting a ligand- or promoter-induced response, and assessing the ability of the test agent to inhibit said response,

wherein inhibition of a ligand- or promoter-induced response by the agent is indicative that the agent is an inhibitor, and

said mammalian CXCR3 protein or functional variant selectively binds at least one chemokine selected from the group consisting of IP-10 and Mig, and is encoded by a nucleic acid sharing at least ~~about 75%~~ 90% nucleotide sequence similarity with the coding region of the sequence illustrated in SEQ ID NO:1.

65-66. (Canceled)

67. (Currently amended) A method of detecting or identifying a promoter of a mammalian CXCR3 protein or functional variant thereof comprising combining an agent to be tested and a host cell expressing a recombinant mammalian CXCR3 protein or functional variant thereof under conditions suitable for detecting a receptor-mediated response, and detecting or measuring said response,

wherein induction or stimulation of said response by the agent is indicative that the agent is a promoter, and

said mammalian CXCR3 protein or functional variant selectively binds at least one chemokine selected from the group consisting of IP-10 and Mig, and is encoded by a nucleic acid sharing at least ~~about 75%~~ 90% nucleotide sequence similarity with the coding region of the sequence illustrated in SEQ ID NO:1.

68. (Canceled)

69. (Previously presented) A method of detecting or identifying an agent which binds a mammalian CXCR3 protein or ligand binding variant thereof of Claim 30, wherein the mammalian CXCR3 protein or ligand binding variant thereof is a human CXCR3 or ligand binding variant thereof.

70. (Previously presented) A method of detecting or identifying an agent which binds a mammalian CXCR3 protein or a ligand binding variant thereof of Claim 34, wherein the mammalian CXCR3 protein or ligand binding variant thereof is a human CXCR3 or ligand binding variant thereof.

71. (Previously presented) A method of detecting or identifying an inhibitor of ligand binding to a mammalian CXCR3 protein or a ligand binding variant thereof of Claim 38, wherein the mammalian CXCR3 protein or ligand binding variant thereof is a human CXCR3 or ligand binding variant thereof.

72. (Previously presented) A method of detecting or identifying an inhibitor of ligand binding to a mammalian CXCR3 protein or ligand binding variant thereof of Claim 42, wherein the mammalian CXCR3 protein or ligand binding variant thereof is a human CXCR3 or ligand binding variant thereof.

73. (Previously presented) A method of detecting or identifying an inhibitor of a mammalian CXCR3 protein or functional variant thereof of Claim 46, wherein the mammalian CXCR3 protein or functional variant thereof is a human CXCR3 or functional variant thereof.

74. (Previously presented) A method of detecting or identifying a promoter of a mammalian CXCR3 protein of functional variant thereof of Claim 48, wherein the mammalian CXCR3 protein or functional variant thereof is a human CXCR3 or functional variant thereof.

75. (Previously presented) A method of detecting or identifying an inhibitor of ligand binding to a human CXCR3 protein comprising:

a) combining an agent to be tested, a ligand of said CXCR3 protein and a composition comprising recombinant human CXCR3 protein under conditions suitable for binding of ligand to said human CXCR3 protein; and

b) detecting or measuring the formation of a complex between said human CXCR3 protein and said ligand,

wherein inhibition of complex formation by the agent is indicative that the agent is an inhibitor, and

said human CXCR3 protein selectively binds at least one chemokine selected from the group consisting of human IP-10 or human Mig and comprises the extracellular N-terminal segment of the protein shown in Figure 2 (SEQ ID NO:2).

76. (Previously presented) The method of Claim 75, wherein the ligand is human IP-10 or human Mig.

77. (Currently amended) The method of Claim 75, wherein the ligand is labeled with a label selected from the group consisting of a radioisotope, spin label, antigen label, enzyme label, ~~flourescent~~ fluorescent group and chemiluminescent group.

78. (Previously presented) The method of Claim 75, wherein the composition comprising recombinant human CXCR3 protein comprises a membrane fraction of host cells expressing recombinant human CXCR3 protein.

79. (Previously presented) The method of Claim 78, wherein the ligand is human IP-10 or human Mig.

80. (Currently amended) The method of Claim 79, wherein the ligand is labeled with a label selected from the group consisting of a radioisotope, spin label, antigen label, enzyme label, ~~flourescent~~ fluorescent group and chemiluminescent group.

81. (Previously presented) A method of detecting or identifying an inhibitor of ligand binding to a human CXCR3 protein comprising:

a) combining an agent to be tested, a ligand of said human CXCR3 protein and a host cell expressing a recombinant human CXCR3 protein under conditions suitable for binding of ligand to said human CXCR3 protein; and

b) detecting or measuring the formation of a complex between said protein and said ligand,

wherein inhibition of complex formation by the agent is indicative that the agent is an inhibitor, and

said human CXCR3 protein selectively binds at least one chemokine selected from the group consisting of human IP-10 or human Mig and comprises the extracellular N-terminal segment of the protein shown in Figure 2 (SEQ ID NO:2).

82. (Previously presented) The method of Claim 81, wherein the ligand is human IP-10 or human Mig.

83. (Currently amended) The method of Claim 81, wherein the ligand is labeled with a label selected from the group consisting of a radioisotope, spin label, antigen label, enzyme label ~~flouresceent~~ fluorescent group and chemiluminescent group.

84. (Previously presented) The method of Claim 81, wherein the human CXCR3 protein can mediate cellular signaling and/or a cellular response, and the formation of a complex is monitored by detecting or measuring a signaling activity or cellular response of said CXCR3 protein induced upon ligand binding, wherein said signalling activity or cellular response is selected from the group consisting of a transient rise in the concentration of cytosolic free Ca^{2+} ($[Ca^{2+}]_i$), chemotaxis, exocytosis, degranulation and inflammatory mediator release.

85. (Previously presented) A method of detecting or identifying an agent which binds a mammalian CXCR3 protein or ligand binding variant thereof, comprising combining an agent to be tested and a composition comprising an isolated and/or recombinant mammalian CXCR3 protein or ligand binding variant thereof under conditions suitable for binding of ligand to said mammalian CXCR3 protein or ligand binding variant, and detecting or measuring the formation of a complex between said agent and said mammalian CXCR3 protein or ligand binding variant,

wherein said mammalian CXCR3 protein or ligand binding variant selectively binds at least one chemokine selected from the group consisting of IP-10 and Mig, and is

encoded by a nucleic acid that hybridizes, under high stringency wash conditions of 2X SSC, 0.1% SDS at room temperature for ten minutes followed by two washes in 1X SSC, 0.1% SDS at 65°C for thirty minutes and a final wash in 0.5X SSC, 0.1% SDS at 65°C for ten minutes, to a nucleic acid selected from the group consisting of:

a) the complement of SEQ ID NO:1; and

b) the complement of a portion of SEQ ID NO:1 comprising the open reading frame.

86. (Previously presented) A method of detecting or identifying an agent which binds a mammalian CXCR3 protein or ligand binding variant thereof of Claim 85, wherein the mammalian CXCR3 protein or ligand binding variant thereof is a human CXCR3 or ligand binding variant thereof.

87. (Previously presented) A method of detecting or identifying an inhibitor of ligand binding to a mammalian CXCR3 protein or a ligand binding variant thereof comprising:

a) combining an agent to be tested, a ligand of said mammalian CXCR3 protein and a composition comprising isolated and/or recombinant mammalian CXCR3 protein or a ligand binding variant thereof under conditions suitable for binding of ligand to said mammalian CXCR3 protein or ligand binding variant; and

b) detecting or measuring the formation of a complex between said mammalian CXCR3 protein or ligand binding variant and said ligand,

wherein inhibition of complex formation by the agent is indicative that the agent is an inhibitor, and

said mammalian CXCR3 protein or ligand binding variant selectively binds at least one chemokine selected from the group consisting of IP-10 and Mig, and is encoded by a nucleic acid that hybridizes, under high stringency wash conditions of 2X SSC, 0.1% SDS at room temperature for ten minutes followed by two washes in 1X SSC, 0.1% SDS at 65°C for thirty minutes and a final wash in 0.5X SSC, 0.1% SDS at 65°C for ten minutes, to a nucleic acid selected from the group consisting of:

i) the complement of SEQ ID NO:1; and

ii) the complement of a portion of SEQ ID NO:1 comprising the open reading frame.

88. (Previously presented) A method of detecting or identifying an inhibitor of ligand binding to a mammalian CXCR3 protein or a ligand binding variant thereof of Claim 87, wherein the mammalian CXCR3 protein or ligand binding variant thereof is a human CXCR3 or ligand binding variant thereof.

89. (Previously presented) A method of detecting or identifying an inhibitor of a mammalian CXCR3 protein or functional variant thereof comprising combining an agent to be tested,

(a) a host cell expressing a recombinant mammalian CXCR3 protein or functional variant thereof, and

(b) a ligand or promoter of said mammalian CXCR3 protein, under conditions suitable for detecting a ligand- or promoter-induced response, and assessing the ability of the test agent to inhibit said response,

wherein inhibition of a ligand- or promoter-induced response by the agent is indicative that the agent is an inhibitor, and

said mammalian CXCR3 protein or functional variant selectively binds at least one chemokine selected from the group consisting of IP-10 and Mig, and is encoded by a nucleic acid that hybridizes, under high stringency wash conditions of 2X SSC, 0.1% SDS at room temperature for ten minutes followed by two washes in 1X SSC, 0.1% SDS at 65°C for thirty minutes and a final wash in 0.5X SSC, 0.1% SDS at 65°C for ten minutes, to a nucleic acid selected from the group consisting of:

i) the complement of SEQ ID NO:1; and

ii) the complement of a portion of SEQ ID NO:1 comprising the open reading frame.

90. (Previously presented) A method of detecting or identifying an inhibitor of a mammalian CXCR3 protein or functional variant thereof of Claim 89, wherein the mammalian CXCR3 protein or functional variant thereof is a human CXCR3 or functional variant thereof.

91. (Previously presented) A method of detecting or identifying a promoter of a mammalian CXCR3 protein or functional variant thereof comprising combining an agent to be tested and a host cell expressing a recombinant mammalian CXCR3 protein or functional variant thereof under conditions suitable for detecting a receptor-mediated response, and detecting or measuring said response,

wherein induction or stimulation of said response by the agent is indicative that the agent is a promoter, and

said mammalian CXCR3 protein or functional variant selectively binds at least one chemokine selected from the group consisting of IP-10 and Mig, and is encoded by a nucleic acid that hybridizes, under high stringency wash conditions of 2X SSC, 0.1% SDS at room temperature for ten minutes followed by two washes in 1X SSC, 0.1% SDS at 65°C for thirty minutes and a final wash in 0.5X SSC, 0.1% SDS at 65°C for ten minutes, to a nucleic acid selected from the group consisting of:

i) the complement of SEQ ID NO:1; and

ii) the complement of a portion of SEQ ID NO:1 comprising the open reading frame.

92. (Previously presented) A method of detecting or identifying a promoter of a mammalian CXCR3 protein or functional variant thereof of Claim 91, wherein the mammalian CXCR3 protein or functional variant thereof is a human CXCR3 or functional variant thereof.

93. (Previously presented) The method of Claim 30 wherein said mammalian CXCR3 protein or ligand binding variant comprises the extracellular N-terminal segment of the protein shown in Figure 2 (SEQ ID NO:2).

94. (Previously presented) The method of Claim 34 wherein said mammalian CXCR3 protein or ligand binding variant comprises the extracellular N-terminal segment of the protein shown in Figure 2 (SEQ ID NO:2).

95. (Previously presented) The method of Claim 38 wherein said mammalian CXCR3 protein or ligand binding variant comprises the extracellular N-terminal segment of the protein shown in Figure 2 (SEQ ID NO:2).

96. (Previously presnted) The method of Claim 42 wherein said mammalian CXCR3 protein or ligand binding variant comprises the extracellular N-terminal segment of the protein shown in Figure 2 (SEQ ID NO:2).

97. (Previously presented) The method of Claim 46 wherein said mammalian CXCR3 protein or functional variant comprises the extracellular N-terminal segment of the protein shown in Figure 2 (SEQ ID NO:2).

98. (Previously presented) The method of Claim 48 wherein said mammalian CXCR3 protein or functional variant comprises the extracellular N-terminal segment of the protein shown in Figure 2 (SEQ ID NO:2).

99. (Previously presented) The method of Claim 61 wherein said mammalian CXCR3 protein or ligand binding variant comprises the extracellular N-terminal segment of the protein shown in Figure 2 (SEQ ID NO:2).

100. (Previously presented) The method of Claim 64 wherein said mammalian CXCR3 protein or functional variant comprises the extracellular N-terminal segment of the protein shown in Figure 2 (SEQ ID NO:2).

101. (Previously presented) The method of Claim 67 wherein said mammalian CXCR3 protein or functional variant comprises the extracellular N-terminal segment of the protein shown in Figure 2 (SEQ ID NO:2).

102. (Previously presented) The method of Claim 85 wherein said mammalian CXCR3 protein or ligand binding variant comprises the extracellular N-terminal segment of the protein shown in Figure 2 (SEQ ID NO:2).

103. (Previously presented) The method of Claim 87 wherein said mammalian CXCR3 protein or ligand binding variant comprises the extracellular N-terminal segment of the protein shown in Figure 2 (SEQ ID NO:2).

104. (Previously presented) The method of Claim 89 wherein said mammalian CXCR3 protein or functional variant comprises the extracellular N-terminal segment of the protein shown in Figure 2 (SEQ ID NO:2).

105. (Previously presented) The method of Claim 91 wherein said mammalian CXCR3 protein or functional variant comprises the extracellular N-terminal segment of the protein shown in Figure 2 (SEQ ID NO:2).

106. (Previously presented) The method of Claim 48 wherein said receptor-mediated response is selected from the group consisting of a transient rise in the concentration of cytosolic free Ca^{2+} ($[Ca^{2+}]_i$), chemotaxis, exocytosis, degranulation and inflammatory mediator release.

107. (Previously presented) The method of Claim 67 wherein said receptor-mediated response is selected from the group consisting of a transient rise in the concentration of cytosolic free Ca^{2+} ($[Ca^{2+}]_i$), chemotaxis, exocytosis, degranulation and inflammatory mediator release.

108. (Previously presented) The method of Claim 91 wherein said receptor-mediated response is selected from the group consisting of a transient rise in the concentration of cytosolic free Ca^{2+} ($[Ca^{2+}]_i$), chemotaxis, exocytosis, degranulation and inflammatory mediator release.